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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/786,600	02/26/2004	Erwin Stotzer	P69477US0	2822

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05/19/2005

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EXAMINER

SPAHN, GAY

ART UNIT

PAPER NUMBER

3673

DATE MAILED: 05/19/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/786,600	STOTZER, ERWIN	
	Examiner	Art Unit	
	Gay Ann Spahn	3673	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 January 2005.
2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
4a) Of the above claim(s) 6-10 is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1-5 and 11-15 is/are rejected.
7) ☒ Claim(s) 1 and 11 is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on 26 February 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☒ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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DETAILED ACTION

Election/Restrictions

Applicant's election with traverse of the invention of Group I, claims 1-5, drawn to a method of making a foundation member in the ground, classified in class 405, subclass 236, in the reply filed on January 14, 2005 is acknowledged. The traversal is on the grounds that:

... inasmuch as independent method claim 1 recites introducing into a soil area the soil working implement that is recited in independent apparatus claim 1[sic, 6], the remaining steps recited in method claim 1 for making a foundation member in the ground correspond to the functions performed by the remaining apparatus elements of claim 6, and claim 6 is itself directed to a device for making a foundation member in the ground. Further, new claim 11 is provided as a linking claim between method claim 1 and apparatus claim 6, reciting a method for making a foundation member in the ground using all of the apparatus elements recited in claim 6 and all the steps recited in claim 1.

This is not found persuasive because applicant's argument is erroneous since method claim 1 does not have all the elements recited in apparatus claim 6. In any event, as to applicant's purported linking claim 11, whether or not the apparatus can perform the functions of the method claim does not prevent the apparatus from being used in a materially different process (i.e., a method involving different procedural steps). See the Manual of Patent Examining Procedure (MPEP) § 806.05(h). The claimed apparatus can be used to remove soil for either treating, (reclamation), or testing. Thus, the claimed apparatus is not limited to use in performing the method recited within either of claims 1 and 11.

The requirement is still deemed proper and is therefore made FINAL.

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Claims 6-10 are withdrawn from further consideration pursuant to 37 CFR

1.142(b), as being drawn to a nonelected invention, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in the reply filed on January 14, 2005.

Priority

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Information Disclosure Statement

The listing of references in the specification is not a proper information disclosure statement. 37 CFR 1.98(b) requires a list of all patents, publications, or other information submitted for consideration by the Office, and MPEP § 609 A(1) states, "the list may not be incorporated into the specification but must be submitted in a separate paper." Therefore, unless the references have been cited by the examiner on form PTO-892, they have not been considered.

Oath/Declaration

The oath or declaration is defective. A new oath or declaration in compliance with 37 CFR 1.67(a) identifying this application by application number and filing date is required. See MPEP §§ 602.01 and 602.02.

The oath or declaration is defective because: in the section where foreign priority is claimed the word "February" is misspelled (i.e., its missing a "y" at the end).

Drawings

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the

(1) "first section" (claim 1, line 8, claim 5, line 1, claim 11, lines 9 and 21, and claim 15, line 1),

(2) "second section" (claim 2, line 10, claim 5, line 2, claim 11, lines 12 and 23, and claim 15, line 2),

(3) "removal device" (claim 11, lines 9 and 22),

(4) "return device" (claim 11, lines 11 and 24), and

(5) "foundation member" (claim 1, lines 1 and 6, and claim 11, lines 1, 3, and 19) must be shown or the features canceled from the claims. No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an

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application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

The abstract of the disclosure is objected to because of the use of legal phraseology such as the word "said" on line 5. Correction is required. See MPEP § 608.01(b).

The following guidelines illustrate the preferred layout for the specification of a utility application. These guidelines are suggested for the applicant's use.

Arrangement of the Specification

As provided in 37 CFR 1.77(b), the specification of a utility application should include the following sections in order. Each of the lettered items should appear in

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upper case, without underlining or bold type, as a section heading. If no text follows the section heading, the phrase "Not Applicable" should follow the section heading:

- (a) TITLE OF THE INVENTION.
- (b) CROSS-REFERENCE TO RELATED APPLICATIONS.
- (c) STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT.
- (d) INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A COMPACT DISC (See 37 CFR 1.52(e)(5) and MPEP 608.05. Computer program listings (37 CFR 1.96(c)), "Sequence Listings" (37 CFR 1.821(c)), and tables having more than 50 pages of text are permitted to be submitted on compact discs.) or
REFERENCE TO A "MICROFICHE APPENDIX" (See MPEP § 608.05(a). "Microfiche Appendices" were accepted by the Office until March 1, 2001.)
- (e) BACKGROUND OF THE INVENTION.
 - (1) Field of the Invention.
 - (2) Description of Related Art including information disclosed under 37 CFR 1.97 and 1.98.
- (f) BRIEF SUMMARY OF THE INVENTION.
- (g) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).
- (h) DETAILED DESCRIPTION OF THE INVENTION.
- (i) CLAIM OR CLAIMS (commencing on a separate sheet).
- (j) ABSTRACT OF THE DISCLOSURE (commencing on a separate sheet).
- (k) SEQUENCE LISTING (See MPEP § 2424 and 37 CFR 1.821-1.825. A "Sequence Listing" is required on paper if the application discloses a nucleotide or amino acid sequence as defined in 37 CFR 1.821(a) and if the required "Sequence Listing" is not submitted as an electronic document on compact disc).

The disclosure is objected to because of the following informalities:

(1) the specification should have section headings as described above; and

(2) the specification cannot refer to the claims by number therein as the

numbering of the claims may change and therefore, the reference to claim 1

(specification, page 1, line 3) and the reference to claim 6 (specification, page 1, line 9)

must be deleted.

Appropriate correction is required.

Claim Objections

Claim 1 is objected to because of the following informalities:

(1) the method steps are not recited in method step terminology as they are in independent method claim 11 (i.e., the steps do not begin with a gerund (i.e., an -ing word)); and

(2) line 8, between the words "hardening" and "suspension", either the word --the-- or the words comparable to --a part of the-- should be inserted for proper antecedent basis since the suspension has already been introduced with the article "a" in lines 4-5.

Appropriate correction is required.

Claim 11 is objected to because of the following informalities:

(1) line 3, before the word "foundation", the word "a" should be changed to --the-- for proper antecedent basis since the foundation member has already been introduced with the article "a" in line 1;

(2) line 7, before "soil area", the word --the-- should be inserted for proper antecedent basis since "soil area" has already been introduced with the article "a" in line 5;

(3) line 9, between the words "removing" and "suspension", either the word --the-- or the words comparable to --a part of the-- should be inserted for proper antecedent basis since the suspension has already been introduced with the article "a" in line 8;

(4) line 13, the word "a" before "soil area" should be changed to --the-- for proper antecedent basis since the term "soil area" has already been introduced with the article "a" in line 5;

(5) line 15, between the word "supplying" and the word "liquid", the word --the-- should be inserted for proper antecedent basis since "liquid" has already been introduced with the article "a" in line 6;

(6) line 18, "a" before "settable suspension" should be changed to --the-- for proper antecedent basis since "settable suspension" has already been introduced with the article "a" in line 8;

(7) line 21, before the word "suspension" the word --the-- should be inserted for proper antecedent basis since the suspension has already been introduced with the article "a" in line 8;

(8) line 21, the word "a" should be changed to --the-- for proper antecedent basis since the first area has already been introduced with the article "a" in line 9; and

(9) line 23, the word "a" should be changed to --the-- for proper antecedent basis since the second area has already been introduced with the article "a" in line 9.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

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(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-5 are rejected under 35 U.S.C. 102(b) as being anticipated by Lindstrom et al. (U.S. Patent No. 5,263,797).

Lindstrom et al. disclose a method for making a foundation member (subterranean cementitious mass made from soil-cement composition) in the ground (Fig. 1 - line on which pumps 24 and 40 are positioned), in which

a soil working implement (28, 29, 30, 34, 36) used for loosening soil material is introduced into a soil area (32),

the loosened soil material in the soil area (32) is mixed with a liquid (see col. 5, lines 6-7; "... the cement slurry mixes with particulate soil produced in the hole 32.") to form a settable suspension and

in the soil area (32), the suspension is hardened to form the foundation member (see col. 5, lines 38-43; "Once the forming of the hole 32 has been completed with soil-cement composition therein, the pipe 30 is removed from the hole 32 leaving the hole 32 filled or partially filled with the soil-cement composition which sets into a hard mass therein."), wherein

prior to hardening, suspension is removed from a first section (accumulation pit 37) of the soil area (see col. 5, lines 21-31) and

at least part of the removed suspension (i.e., the water part of the suspension) is returned to a second section (below accumulation pit 37) of the soil area (32).

As to claim 2, Lindstrom et al. disclose the method of claim 1 as discussed above, and Lindstrom et al. further discloses that the removed suspension is treated (see col. 5, lines 48-49; “. . . the excess soil-cement mixture can be processed to concentrate it; and col. 5, line 59 through col. 6, line 16; “. . . separator 58 (e.g., a screen separator. The separator 58 functions to separate a water/solids mixture from the soil-cement composition. . . . The recycled water flows along with additional fresh water into the mixer 12 by way of the conduit 14 wherein it is again utilized for forming cement slurry. . . .”) prior to return.

As to claim 3, Lindstrom et al. disclose the method of claim 1 as discussed above, and Lindstrom et al. also disclose that the removal and return of the suspension are performed continuously.

As to claim 4, Lindstrom et al. disclose the method of claim 1 as discussed above, and Lindstrom et al. also disclose that the loosening and mixing of the soil material are carried out at the same time by the soil working implement.

As to claim 5, Lindstrom et al. disclose the method of claim 1 as discussed above, and Lindstrom et al. also disclose that the first section (accumulation pit 37) of the soil area (32) is positioned above the second section (lower section of 32 where water in cement slurry is deposited via ports 36) of the soil area (32).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 11-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lindstrom et al. (U.S. Patent No. 5,378,085) in view of Kono et al. (U.S. Patent No. 5,378,085).

As to claim 11, Lindstrom et al. discloses the method for making a foundation member (subterranean cementitious mass made from soil-cement composition) in the ground (Fig. 1 - line on which pumps 24 and 40 are positioned), comprising the steps of:

(a) providing a device (system 10) for making a foundation member (subterranean cementitious mass made from soil-cement composition) in the ground (Fig. 1 - line on which pumps 24 and 40 are positioned), comprising:

a soil working implement (34) for loosening soil material in a soil area (32),
a supply device (24, 26, 30, 36) for supplying a liquid to the loosened soil material and

a removal device (conduit 38 and pump 40) for removing suspension from a first section (accumulation pit 37) of the soil area (32) and

a return device (conduit 68 and valve 70) for returning at least part (i.e., the water part) of the removed suspension to a second section (below accumulation pit 37) of the soil area (32),

(b) introducing the soil working implement (34) into a soil area (32) to loosen the soil material therein,

(c) supplying liquid (cement slurry comprised of hydraulic cement, water, and dispersant - see col. 4, lines 53-55) to the loosened soil material in the soil area (32) using the supply device (24, 26, 30, 36),

(d) mixing the loosened soil material in the soil area with the liquid (see col. 5, lines 6-7; “. . . the cement slurry mixes with particulate soil produced in the hole 32.”) to form a settable suspension,

(e) hardening the suspension in the soil area (32) to form the foundation member (see col. 5, lines 38-43; “Once the forming of the hole 32 has been completed with soil-cement composition therein, the pipe 30 is removed from the hole 32 leaving the hole 32 filled or partially filled with the soil-cement composition which sets into a hard mass therein.”), wherein,

(f) prior to hardening, suspension is removed from a first section (accumulation pit 37) of the soil area (32), using the removal device (conduit 38 and pump 40), and

(g) at least part (i.e., the water part) of the removed suspension is returned to a second section (below the accumulation pit 37) of the soil area (32), using the return device (conduit 68 and valves 70).

At col. 5, lines 6-7, Lindstrom et al. makes it clear that the cement slurry mixes with particulate soil produced in the hole (32), but Lindstrom et al. does not explicitly disclose a mixing device for mixing the loosened soil material in soil area (32) with the liquid to form a settable suspension or that the step of mixing the loosened soil material

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in the soil are with the liquid to form a settable suspension is accomplished by using the mixing device.

Kono et al. discloses a method and apparatus for in situ construction of deep soil-cement structures which includes mixing paddles (18) connected to the drill string or shaft (10) above the auger blades (20), wherein the mixing paddles (18) are for mixing hardening slurry with soil (see col. 5, lines 30-31 wherein it states "The hardening slurry is consolidated with the soil by soil mixing paddles 18).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Lindstrom et al.'s method of making a foundation member in the ground by including the mixing paddles as taught by Kono et al. in order to get a more homogeneous soil-cement mixture.

As to claim 12, Lindstrom et al. in view of Kono et al. disclose the method of claim 11 as discussed above, and Lindstrom et al. also discloses the further step of treating (i.e. processing to concentrate (see col. 5, lines 48-49) and separating or screening (see col. 5, lines 57 through col. 6, line 3)) the removed suspension prior to return in step (g).

As to claim 13, Lindstrom et al. in view of Kono et al. disclose the method of claim 11 as discussed above, and Lindstrom et al. also discloses that the removal of step (f) and the return of the suspension of step (g) are performed continuously.

As to claim 14, Lindstrom et al. in view of Kono et al. disclose the method of claim 11 as discussed above, and Lindstrom et al. also discloses that the loosening and mixing of the soil material of steps (b) and (d) are carried out at the same time by the soil working implement.

As to claim 15, Lindstrom et al. in view of Kono et al. discloses the method of claim 11 as discussed above, and Lindstrom et al. also discloses that the first section (accumulation pit 37) of the soil area (32) is positioned above the second section (below accumulation pit 37) of the soil area (32).

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. U.S. Patent No. 4,640,649 to Nakanishi discloses a method and apparatus for forming an underground solidification structure wherein filling liquid is suctioned off and recycled for return to the cavity for protection against the cavity collapsing. U.S. Patent No. 6,183,166 to Schellhorn discloses a method of centrifugally forming a subterranean soil-cement casing. U.S. Patent No. 4,180,350 to Watts discloses a method for forming foundation piers. U.S. Patent No. 6,425,713 to Fox et al. discloses lateral displacement pier, and apparatus and method of forming the same. U.S. Patent No. 2,555,359 to Montague discloses a pile structure and method of making same. U.S. Patent Application Publication No. 2003/0082012 to Clark discloses a method and apparatus for forming foundations. U.S. Patent Application Publication No. 2001/0028827 to Vickars et al. discloses a method and apparatus for forming piles in

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place. U.S. Patent No. 6,123,484 to Fujita discloses a soil pile and method for constructing same. U.S. Patent No. 6,120,214 to Iovino discloses a process for constructing reinforced subterranean columns. U.S. Patent No. 5,707,180 to Vickers et al. discloses a method and apparatus for forming piles in-situ. U.S. Patent No. 5,560,739 to Kunito discloses a method of forming a modified ground in an earthen foundation. U.S. Patent No. 5,542,786 to Blum discloses an apparatus for monitoring grout pressure during construction of auger pressure grouted piling. U.S. Patent No. 5,417,522 to Kono et al. discloses soil fragmentation members and multiple lateral support structures for improved soil mixing and efficient boring for use on multi-shaft auger soil mixing apparatus. U.S. Patent No. 5,368,415 to Kono et al. discloses spiral flights for improved soil mixing and efficient boring for use on multi-shaft auger soil mixing apparatus. U.S. Patent No. 4,906,142 to Taki et al. discloses side cutting blades for multi-shaft auger system and improved soil mixing wall formation process. U.S. Patent No. 4,662,792 to Gessay discloses a method and device for the in-situ formation of columns of stabilized and compacted soil. U.S. Patent No. 4,533,279 to van den Elzen et al. discloses a method of making a foundation pile. U.S. Patent No. 4,165,198 to Farmer discloses a method for forming pier foundation columns. U.S. Patent No. 3,604,214 to Turzillo discloses a means and method of making columnar structure in-situ.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gay Ann Spahn whose telephone number is (571)-272-

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7731. The examiner can normally be reached on Monday through Thursday, 8:30 am to 7:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Heather C. Shackelford can be reached on (571)-272-7049. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Gay Ann Spahn, Patent Examiner
May 2, 2005


HEATHER SHACKELFORD
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3600